

REMARKS

Claims 1-5 and 7-19 are now pending in the application. Claim 6 was previously cancelled without prejudice. By this paper, Applicant has amended claims 1, 4-5 and 7, and has added new claims 8-19 for consideration. Support for the amendments and new claims can be found throughout the specification, drawings and claims as originally filed. No new matter has been added by this paper. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 102

Claims 1-5 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Angelo et al. (U.S. Pat. No. 6,170,992; hereinafter "Angelo").

Claim 7 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Romero et al. (U.S. Pat. No. 5,186,472; hereinafter "Romero").

These rejections are respectfully traversed.

Claim 1

At the outset, Applicant notes that claim 1 has been amended and recites in part "a retainer having a first axially extending portion slidably mounted directly to the second axially extending ring portion of said sleeve in a radial interference fit and having a second portion adapted to mount to the second member and a third portion engaging said radially extending portion of said sleeve...". Support for the amendment to claim 1 can be found throughout the application as filed, at least on page 4, lines 10 – 23 and Figures 1-2. Applicant respectfully submits that Angelo fails to disclose such a retainer as claimed in claim 1.

Angelo discloses a rotating seal unit having a first metallic insert 19 with a radially extending portion 22 and an axially extending portion with a peripheral extension 27. The axially extending portion and the peripheral extension 27 together form part of an axially extending groove 24. A non-rotating seal unit has a second metallic insert 15 with a **rubber sealing covering 16 that includes a rubber circumferential relief 23** extending radially inward towards the axially extending groove 24. Relief 23 is a separate element from insert 15 and is constrained in an **axial** direction by peripheral extension 27 and a radial surface 26 when the two units are coupled together before being assembled between faces of a roller bearing. Angelo is otherwise silent as to any axially extending portion of insert 15 (or even radial relief 23) being mounted to any member of the rotating unit in a radial interference fit prior to assembly to the bearing.

Accordingly, Applicant respectfully submits that Angelo fails to disclose or suggest a retainer having a first axially extending portion slidably mounted **directly** to the second axially extending ring portion of said sleeve in a radial interference fit. Rather, Angelo discloses metallic insert 15 and a separate rubber seal covering 16 with a radially inwardly extending rubber relief 23, both of which are positioned between the insert 15 and the peripheral portion 27 of insert 19. In this regard, Applicant notes that metallic insert 15 cannot contact peripheral extension 27, much less be **directly** mounted in a radial interference fit with peripheral portion 27 or any other portion of insert 19. Applicant further submits that the rubber seal covering 16 is a separate and distinct element from metallic insert 15 and can not properly be construed as the metallic insert.

Applicant further submits that Angelo fails to disclose or suggest the retainer having a third portion that engages the radially extending portion of the sleeve. As noted above, Angelo discloses a metallic insert 15, characterized in the Office Action as the retainer, which includes an axially extending portion proximate the peripheral portion 27 and a radial portion mounted to a seal having lips 17 and 18. Angelo is otherwise silent as to any radially extending portion engaging a radially extending portion of the metallic insert 19. In this regard, Applicant notes that the radially extending portion of insert 15 is spaced apart by design from the radially extending portion of insert 19 by at least sealing lips 17 and 18. See Angelo at Figure 1.

With regard to the remarks in the Response to Arguments section of the outstanding Office Action, Applicant respectfully disagrees with the characterization of Angelo in the annotated Figure. As discussed in Applicant's previous response, Angelo is completely silent as to any radial interference fit between the metallic insert 15 and the metallic insert 19. To the extent the rubber radial relief 23 of the sealing covering 16 could be properly construed as the axially extending portion of the metallic insert 15, which Applicant does not concede and submits is an unsupported construction, rubber relief 23 is not **mounted** to peripheral portion 27. With reference to the annotated Figure in the outstanding Office Action, Applicant submits that to the extent the seal components would be installed this way, which Applicant again notes is not disclosed in any manner in the Angelo reference, the rubber relief 23 would merely slide over the peripheral portion 27 such that the relief 23 can be positioned and axially constrained in groove 24 between the peripheral portion 27 and element 26 before the sealing device is assembled onto the bearing. See Angelo at col. 2, lines 56-64. In this regard,

Applicant further submits that relief 23 would not then be disengaged from peripheral portion 27 during assembly of sleeve 19 to the bearing, as it is already disengaged prior to such assembly. See Angelo at col. 2, line 56 to col. 3, line 3.

Based on the foregoing, Applicant respectfully submits that independent claim 1 is patentably distinguishable over Angelo and is therefore in condition for allowance. Regarding claims 2-5, these claims depend directly or indirectly from independent claim 1 and are believed to be in condition for allowance for at least the reasons set forth above. The Examiner is therefore respectfully requested to reconsider and withdraw the rejection to claims 1-5.

Claim 7

With regard to the rejection of claim 7, Applicant notes that claim 7 has been amended and recites in part "...a seal supported by a retainer, the retainer including a first axially extending portion which is mounted directly to an axially extending surface of the sleeve in a radial interference fit...". Support for the amendment to claim 7 can likewise be found throughout the application as filed, at least on page 4, lines 10 – 23 and Figures 1-2. Applicant respectfully submits that Romero fails to disclose such a retainer as claimed in claim 7.

Romero discloses a shaft seal 10 having a first metal casing 12 and a second metal casing 14. First casing 12 has a flange portion 28 ending in a tip 52. An elastomeric seal body 40 is bonded or molded to a radially extending flange portion 36 of second casing 14. **Seal body 40 includes an elastomeric bumper portion 50** that engages tip 52 of casing 12 and prevents flange 28 from making metal-metal contact

with flange portion 36 of second casing 14. During operation, tip 52 slices a groove and embeds itself into bumper portion 50. See Romero at col. 4, lines 62-65.

Accordingly, Applicant respectfully submits that Romero fails to disclose a seal supported by a retainer, with the retainer including a first axially extending portion which is **directly** mounted to an axially extending surface of the sleeve in a radial interference fit. Rather, Romero discloses a radially extending flange 36 of the casing 14 and an elastomeric seal 40, not a retainer, which is mounted to flange 36. Further, Romero discloses that the bumper portion 50 of seal 40 (and not casing 14) engages tip 52 of flange 28. Applicant submits that elastomeric seal 40 is disclosed as a separate and distinct element from metallic casing 14, and seal 40 can not properly be characterized as casing 14. In this regard, Applicant further submits that Romero fails to disclose any axially extending portion of casing 14 that is **directly** mounted to an axially extending portion of casing 12, as clearly shown in Figures 1-3 of Romero.

Based on the foregoing, Applicant respectfully submits that independent claim 7 is patentably distinguishable over Romero and is believed to be in condition for allowance. The Examiner is therefore respectfully requested to reconsider and withdraw the rejection.

NEW CLAIMS

Applicant has submitted new claims 8-19 for consideration. New claims 8-12 depend directly or indirectly from independent claim 7, and new claims 13-18 depend directly or indirectly from independent claim 1. Applicant respectfully submits that new claims 8-18 are patentably distinguishable over the cited references at least based on

their dependency from independent claims 1 or 7, which are believed to be in condition for allowance for the reasons set forth above.

Regarding new independent claim 19, Applicant respectfully submits that the cited art of record fails to disclose or suggest a seal having the sleeve, first retainer ring, second retainer ring, and seal features and interaction, as claimed. Applicant further submits that the cited art fails to disclose the first retainer ring being disengaged from the sleeve by the first member engaging the radially extending portion of the sleeve during assembly of said sleeve on to said first member.

CONCLUSION

It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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